



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW308C BS 1289      BYPASS RATIO: 4.1  
 UNIQUE ID NUMBER: 14FW103      PRESSURE RATIO ( $\pi_{00}$ ): 21.1  
 COMBUSTOR: TALON II  
 ENGINE TYPE: MTF      RATED THRUST ( $F_{00}$ ) (kN): 31.2

REGULATORY DATA      **\*\* DATA SUPERSEDED \*\***      SEE FOLLOWING UID FOR REVISED DATA:      **01P14PW147**

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	1.1	102.8	46.3	9.1
AS % OF ORIGINAL LIMIT	5.6	87.1	56.4	27.9
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			70.5	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			71.5	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			72.0	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			76.3	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 x REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
 - DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 - OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	0.370	0.00	0.50	19.10	6.6
CLIMB OUT	85	2.2	0.307	0.00	0.57	14.96	6.8
APPROACH	30	4.0	0.116	0.00	4.18	6.80	2.2
IDLE	7	26.0	0.049	0.39	37.05	3.53	5.7
LTO TOTAL FUEL (kg) or EMISSIONS (g)			160	30	2961	1359	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				1.0	95.1	43.7	8.2
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.7	5.9	1.1	0.7
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.2-1.5	88.4-99.8	42.4-44.3	7.5-8.9

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.3-100.7
TEMPERATURE (K)	275-278
ABS HUMIDITY (kg/kg)	0.0024-0.0047

### FUEL

SPEC	Jet A-1
H/C	1.85-1.89
AROM (%)	17.6-21.7

MANUFACTURER: Pratt & Whitney Canada  
 TEST ORGANIZATION: PW308 Development Engineering  
 TEST LOCATION: Mississauga, Ontario, Canada  
 TEST DATES: 31/03/2012-31/05/2012

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
x	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

### REMARKS

- P&WC ER 7939
- Engines tested: CF0550/01, CF0551/01, CH0568/01
- TALON II combustion system
- PW308C Build Spec 1289
- Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
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Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)